

# Motivational effects of pay dispersion in pay for performance programs implemented in Romanian companies

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**Abstract.** *The present study investigates the motivational effects in a sample of Romanian employees in private companies that implement pay for performance programs of one of the characteristics of these programs, namely pay dispersion, and on the potential mediating role of organizational justice in these effects. To this aim, we examined the relationships between the amounts of pay dispersion introduced by the respective financial incentive system, employee perceptions of distributive and procedural justice, work motivation, and base salary, respectively. The results of the data analysis, performed through structural equation modeling, support our hypotheses concerning the positive effect of performance – related pay dispersion on motivation and the mediating role of the two dimensions of organizational justice in this effect. Larger financial rewards allocated by the financial incentive system for high performers increase employee perceptions of distributive and procedural justice, which, in turn, foster work motivation. Base salary was also found to influence pay dispersion, as well as perceived distributive justice.*

**Keywords:** performance pay, work motivation, distributive justice, procedural justice, incentives.

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## Introduction

One of the main solutions adopted by companies worldwide to the challenge of increasing their business performances is to develop and implement flexible pay systems that would stimulate the motivation, efforts and consequent performances of their staff (Milkovich et al., 2013). In these “pay for performance” programs, employees are evaluated according to a set of criteria and standards communicated beforehand and then they are rewarded according to their results or behaviors in the previous period. Due to the intuitive appeal of the idea of financial incentives and to the relative ease of designing such programs, they have gradually become the norm rather than the exception, at least among organizations located in the Western world. For instance, 84% of the private companies that participated in a 2012 survey (WorldatWork, 2012) were found to implement a certain form of pay for performance program, while other studies (Weibel et al., 2009) report that these programs are becoming more and more frequent even in public institutions across various countries. The present paper focuses on the motivational effects of one of the characteristics of these financial incentive systems, namely pay dispersion, and on the potential mediating role of organizational justice in these effects. In what follows, we briefly present the main findings of the previous research on the influences of pay for performance programs. Then, we discuss the other two main concepts of our research, namely pay dispersion and organizational justice, presenting their main organizational and individual effects that have

been documented not only in companies that use variable pay in order to increase the performances of their employees, but also in those which distribute financial rewards according to other non-performance-related criteria. Finally, we describe the aims, hypothesis, methodological details and results of the empirical study conducted on the topic of the influence of pay dispersion on motivation in Romanian companies currently implementing pay for performance programs.

### **Pay for performance programs**

Generally, the studies conducted so far of the effects of the pay for performance programs implemented in various organizations have provided support for the thesis that they increase employees' work efforts, their productivity and, consequently, the performance of the organization as a whole (Combs et al., 2006; Gerhart and Fang, 2014). Thus, empirical results prove that money can function as a powerful incentive, motivating employees to invest higher amounts of effort in their tasks than before. This effect is explained in the framework of the expectancy theory (Vroom, 1964) as a consequence of the higher valence of the rewards that employees anticipate to receive for their higher performances on the job. Empirical results prove that the introduction of financial incentive systems significantly increases the overall productivity of the organizational staff - for instance by 30% in the Locke et al. (1980) study - and the company profit; for example, such programs were shown to deliver a 134% return of the financial investments that the company made in the supplementary rewards allocated for high performers during its implementation (Gibson, 1995).

Yet, several negative effects of pay for performance programs have also been noted. First, they might excessively focus employees on obtaining the results that are defined in the respective program as describing high performance even at the risk of ignoring other tasks and behaviors, which might be also important for their jobs (Wright et al., 1993; Beer and Cannon, 2004). This, in turn would create hidden costs of the pay for the performance program for the company. A specific organizational dimension that has been repeatedly reported as being affected by the introduction of individual incentive systems concerns the relationships between employees. In this respect, the excessive focus on reaching one's work targets might be detrimental for one's availability to involve in team activities and for one's effort invested in teamwork (Kohn, 1993). Moreover, the differences in pay that result from a pay for performance program might give rise to negative interpersonal issues, such as jealousy, thus affecting the general morale of the staff (Marsden and Richardson, 1994). Another risk of these programs, as suggested by the critics of the financial incentives approach, is that of undermining employees' intrinsic motivation to perform the tasks implied by the performance standards adopted in the respective program (Deci and Ryan, 1985; Pfeffer, 1998). In this perspective, the extrinsic rewards allocated for high performance would make employees lose their personal interest in their job activities, as they would come to perceive their efforts as externally motivated and, thus, lacking intrinsic appeal. Yet, this presumed effect of pay for performance plans has been contradicted by several empirical results and theoretical positions (Gerhart and Fang, 2014).

Nevertheless, the theoretically - inspired arguments and the empirical results suggesting that pay for performance plans can also have negative effects led researchers to gradually extend their focus from the initial narrow topic of productivity to the whole array

of consequences that such plans might have on the individual employees, work teams and organizations and that could ultimately affect the performance of the company as a whole (Stajkovic and Luthans, 2001). Moreover, studies have begun to take into consideration potential moderators of the positive impact of financial incentives on employees' performance (Hollensbe and Guthrie, 2000), by investigating the conditions under which these incentives work best, respectively those under which pay for performance programs might lead to unintended negative effects that may ultimately undermine their purpose.

One of the factors that significantly affect the success of these programs appears to be the national culture of the country in which the respective company is located (Hofstede, 2001). According to this point of view, employees' reactions to the financial incentive system, in terms of its acceptance, consecutive increases in motivation and changes on other attitudinal and behavioral dimensions important for the organization, depend on a set of factors that are deeply rooted in their national culture. Thus, the effects of pay for performance programs need to be empirically investigated in each cultural and national space, since the generalization of results documented elsewhere might not account for the specificities of each such space. In line with this argument, the goal of the study reported here was to analyze the motivational consequences of the pay for performance programs implemented in a sample of Romanian organizations, by assessing the impact of another factor that previous studies indicated as a significant moderator of the effects of these programs, namely pay dispersion. Given the focus of our study on this specific variable, we present the main findings presented in the literature on its organizational consequences in a separate section.

### **Pay dispersion**

Pay dispersion or variation refers to the amount of difference between employees in what regards their total financial rewards. In the companies with compressed pay systems, employees at the two extremes of the pay distribution are close to each other, while other organizations use a dispersed pay system, in which the differences between workers are much higher even at the same organizational level (Downes and Choi, 2014). Concerning the associations between pay dispersion and employees' performance, several studies revealed significant positive relationships between the two. For instance, Becker and Huselid (1992) showed that high variations in the financial rewards received by NASCAR drivers improve driving performance, an effect due to the fact that large differences in pay function as a strong motivator and leads to more aggressive decision making in driving. Similarly, Kepes et al. (2009) showed that the amount of pay differences among truck drivers fosters the overall performance of the company.

On the other hand, there are also studies that indicate detrimental effects of pay dispersion on performance; for instance, Pfeffer and Langton (1993) reported such negative effects among the university staff who participated in their research. Similar negative consequences of pay variation were found by Bloom and Michel (2002) by studying its relationship with the work performances of a sample of executive managers. The contradictory nature of these findings can be understood by taking into account the specificities of each company in terms of a set of characteristics on which the organizations in which pay dispersion leads to positive outcomes differ from those in which it has detrimental consequences on work performance. One of the most important such characteristic is pay basis or the factors that create the variations in pay among employees.

From this point of view, when employees perceive the reasons of the pay differences as legitimate, pay dispersion increases their motivation and performance (Downes and Choi, 2014). On the other hand, if workers do not accept the source of the pay variability among them, these differences in financial rewards are detrimental to their motivation. Generally, the most widely accepted criteria as being legitimate in creating pay variation is work performance (Shaw and Gupta, 2007). Conversely, in the organizations where pay is not decided on the basis of employees' performance, but on other factors such as length of service, hierarchical position, qualifications, company politics etc., large pay dispersions affect work motivation and subsequent performance. For instance, a study on a large sample of workers in two industrial sectors (Shaw et al., 2002) concluded that in the companies that implemented pay for performance programs, pay dispersion fosters performance; in those in which pay is not decided on performance indicators, pay variation has a negative effect on performance. In other words, employees are performing worse on their jobs in the companies where pay dispersion is not the outcome of a pay for performance program than in those where pay differences result from such a program.

The empirical study reported in this paper is focused on this positive effect of pay dispersion on work motivation in companies using pay for performance plans, by extending the current theoretical models in the area through the analysis of the mediators of this effect. In this respect, it is important to briefly review the most relevant theoretical explanations of the effect of performance - based pay dispersion on future work performance.

The first relevant theoretical model is expectancy theory (Vroom, 1964), which contributes to the understanding of the aforementioned effect through two of its essential psychological building blocks: valence and instrumentality. In the framework of this theoretical model, employees are more motivated when they consider the rewards that their company allocates them for their efforts as having a high valence; in the case of financial rewards, higher potential retributions are more motivating. Thus, large pay dispersions, implicitly the possibility that each worker could receive large financial rewards, have a positive effect, but under one condition: instrumentality. In this respect, employees should perceive that these large rewards are indeed accessible for them when they would reach a certain level of performance. In other words, large pay variation has a motivating function only when employees perceive that a larger investment of effort from their part would bring them high rewards (Lawler, 1990). The instrumentality factor explains the difference between the effects of pay dispersion in the companies implementing pay for performance plans (in which pay is strictly and visibly tied to performance) and those in the organizations in which pay dispersion is decided upon other criteria.

The second psychological phenomenon that contributes to this difference in the effects of pay dispersion in the two types of companies is perceived injustice, which affects the motivation of the employees working in the organizations of the second type. In terms of equity theory (Adams, 1965), employees compare the ratio of their inputs (such as work efforts, qualifications, skills, etc.) to their outputs (mostly the rewards that they have received from the company for these inputs, such as pay, past promotions, etc.) to the same ratio that they perceive in the case of their colleagues. When they consider that their ratio is inferior to that of others (for instance because other employees receive larger financial rewards for the same inputs), one of the prevalent reactions is to adjust their inputs by

diminishing their work efforts in order to make the difference in outputs more equitable. This social comparison perspective further explains the detrimental effects of pay dispersion in the organizations that do not use pay for performance programs. In the framework of the equity theory, these companies base their pay policy on criteria that might be perceived, at least by the employees who earn less, as illegitimate, because large pay (financial outputs) are not due to corresponding large performance inputs. As a result, those earning smaller financial rewards lower their work effort in order to make pay differences equitable. Thus, in these companies, pay compression is recommendable (Bloom, 1999; Downes and Choi, 2014), in order to avoid such detrimental effects of pay variation on low earners' motivation. On the other hand, in the organizations that implement pay for performance programs, due to the fact that pay dispersion tends to be perceived as equitable by employees, large differences in pay should foster work motivation. This is the effect that the empirical study that we conducted aimed to verify; as mentioned above, we further aimed to reveal mediators of this effect. In this respect, we hypothesized that the consequences of pay dispersion on work motivations are mediated by certain variables belonging to a psychological field related to that of equity, namely perceived organizational justice.

### **Organizational justice**

The concept of organizational justice refers to the degree to which employees perceive the decisions of their organization that affect them as fair, and it has gradually become an important field of interest in management studies (Morrell, 2011). In line with the equity theory (Adams, 1965), its importance stems from the fact that employees' evaluations of the managerial decisions and policies in terms of their equity or fairness significantly influence their reactions, and these effects are particularly large in the field of financial rewards allocation (Folger and Konovsky, 1989). For instance, an assessment of 492 pay for performance programs implemented in the U.S. and Canada (Fay and Thompson, 2001) showed that the programs that had positive effects on productivity were those that, among other characteristics, were perceived by employees as having a satisfactory level of fairness or justice. Such results confirm the significant role of perceived organizational justice in matters of pay allocation, pointed out by Adams (1965), who asserted that perception of inequity in the distribution of financial rewards can be detrimental to the motivational effects of pay, and can even lead to negative unintended consequences.

There are two major types of organizational justice that past research has revealed as having the greatest impact on employees' reactions and subsequent behaviors: distributive, respectively procedural justice. Distributive justice concerns the perceived fairness of outcomes that employees receive from their company; in the compensation area, it refers to the degree to which employees perceive their pay as equitable, when comparing themselves to other colleagues. Procedural justice refers to the perceived fairness of the organizational procedures used in order to decide these outcomes; concerning pay issues, it represents employees' evaluation of the fairness of the methods and criteria upon which their financial rewards are decided (Roth, 2006).

Among the various potential outcomes of perceived distributive and/or procedural justice, job satisfaction has been a privileged topic of research. Several studies investigated the effects of perceived organizational injustice on the levels of satisfaction that employee feel with their work and their company generally and on its specific facets. For instance, one

of these facets is pay satisfaction, or employees' subjective evaluation of their financial rewards, which is directly related to their perception of the fairness of the financial rewards that are distributed by their company. Consequently, pay satisfaction has been shown to be influenced by perceived organizational justice (DeConick and Stilwell, 2004; Sweeney and McFarlin, 1993). In a research examining the differences between the two types of organizational justice in what regards their effects on pay satisfaction, Tekleab et al. (2005) took into account two facets of this dimension, namely pay level satisfaction, concerning workers' satisfaction with the actual amount of financial rewards received, and pay raise satisfaction, focused on the salary raises that employees receive. Their results indicated that these two facets of pay satisfaction are differently affected by the two types of organizational justice: first, distributive justice emerged as a stronger predictor of pay level satisfaction, while pay raise satisfaction was more influenced by procedural justice. On the other hand, organizational justice mediated the effects of actual pay levels on both pay level satisfaction and pay raise satisfaction.

Besides the important role of organizational justice in determining employees job and especially pay – related satisfaction, other studies highlighted similar effects on other important dimensions, such as turnover intentions (Lum et al., 2008), organizational identification (Kwon et al., 2008) and work behaviors. Concerning the latter aspect, several studies and meta-analytic reviews showed that employees who perceive high levels of organizational justice in what concerns the ways they are treated by their company display less work withdrawal behaviors (Pinder, 2008), less counterproductive behaviors and engage in fewer conflicts (Cohen-Charash and Spector, 2001), are more motivated in their jobs (Cropanzano and Rupp, 2003) and consequently have higher work performances (Colquitt et al., 2001).

## **Empirical study**

### ***Aims and hypothesis***

The purpose of our study was to test the role of justice perceptions, both distributive and procedural, in the relationships between pay dispersion and work motivation in a sample of Romanian companies that implemented pay for performance programs. While previous studies have documented the importance of organizational justice for employees' performances and motivation, our aim is to extend the current state of research by focusing on a specific context, namely that of performance pay, specifically in the short – term financial incentive systems, in which employees receive their performance bonuses monthly, quarterly or yearly. Most variations of performance pay practices fall in this category, such as bonus schemes, sales commissions, piece rates, gain sharing. Others involve least frequent reward distributions; for example, in companies that use profit sharing through contributions to employees' retirement accounts as a managerial practice to foster work motivation, employees begin to receive their rewards only at the moment of their retirement. In such cases, the pay for performance program has no effect on the current pay dispersion, since its financial consequences are postponed over a long period, while in the short-term variations of these programs the variations in pay among employees are based, at least in part, on the outputs of the respective incentive system.

As argued above, employees tend to consider the differences in pay among them that emerge from performance – related criteria as more legitimate; thus, pay dispersion in organizations implementing pay for performance programs appears to be generally

perceived as equitable (Downes and Choi, 2014), and this perception should, in turn, foster work motivation. Nevertheless, even in such organizations, work motivation could vary as a function of the amount of differences between employees that the respective pay for performance program allows. In other words, while the principle of basing pay on performance is considered legitimate, larger pay variations could be more influential on employees' motivation, while smaller rewards could be ineffective. In this respect, expectancy theory highlights that in order to increase motivation, financial rewards should reach a certain level of valence for the employees that would receive them; rewards below this threshold fail to stimulate their efforts in the direction envisioned by the company. Moreover, previous studies (Gneezy and Rustichini, 2000) show that such financial rewards that are perceived as insufficient for the level of effort required in order to obtain them even have detrimental effects on performance.

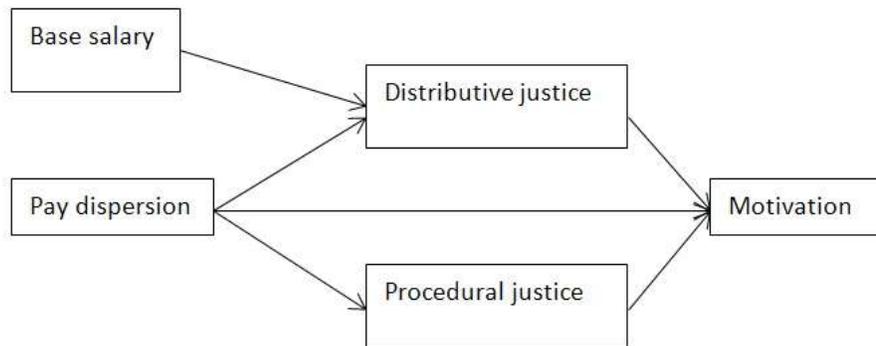
Overall, our hypothesis is that the size of pay dispersion in pay for performance programs is positively related to employees' motivation. Concerning pay dispersion, our approach is to analyze it not as the mean difference among employees in what regards their actual financial rewards that they receive over a certain time interval, but to use an index specifically related to the nature of pay for performance programs. More specifically, we address and measure pay dispersion as the amount of pay that the respective employees would receive over their base salaries if their work performance is at its maximum level, as stated in the pay for performance program implemented by their company. In other words, we use an individual – level index of pay variation, which, of course, is strictly related to the more frequently used group level index, since the actual amount of financial rewards received by employees varies among them, depending on their actual performance.

Furthermore, we hypothesize that the two dimensions of organizational justice play a mediating role in the relationship between pay dispersion and work motivation, similar to that revealed by Tekleab et al. (2005) in their research on the influence of pay levels on pay satisfaction. Our hypothesis is comprised of two presumed effects; first, as mentioned above, equity theory and the empirical research that attested the importance of the differences in pay among employees in what regards their perceptions of equity concur to the idea that under pay for performance plans, large pay variations should be more motivating. The argument here is that in the companies that implement these plans, employees generally consider pay differences among them as equitable, since they correspond to differences in inputs (i.e. performance) among employees. Consequently, larger differences should be perceived as even more equitable than small ones. The second effect implied by our hypothesis consists of the fostering influence of perceived equity, addressed in our research through distributive and procedural justice, on work motivation, an effect that has been suggested by previous studies (e.g. Cropanzano and Rupp, 2003) on organizational justice and work behaviors and attitudes. Our approach extends the perspective on this relationship by taking into account the influence of pay dispersion on organizational justice.

In line with previous studies that have investigated the relationships between pay and perceived justice in companies that were not currently implementing pay for performance plans (e.g. Sweeney, 1990; Tekleab et al., 2005), we also hypothesized that organizational justice is influenced by employees' base salaries, besides their potential amount of supplementary pay that is allocated to them by the pay for performance program currently implemented in their companies. These previous studies indicate that base pay specifically affects the perceptions of distributive justice, as employees who receive lower

salaries tend to perceive the distribution of financial rewards in their company as being less equitable. Thus, in the model that we empirically test in our research, distributive justice is determined both by employees' pay dispersion, as stated in their pay for performance program, and by their individual base salary.

The hypothesized model that we tested in the present research is presented in Figure 1.



*Figure 1. The hypothesized model of relationships between pay dispersion, base salary, distributive and procedural justice, and work motivation*

Source: Author's own design.

The context of our study has two important specificities. First, we analyze these relationships in companies that are currently implementing pay for performance programs; hence, our results could contribute to the understanding of the performance – related phenomena that are generated in these circumstances, specifically on the role of pay dispersion in this context. Second, we focus on Romanian companies, located in a cultural context different from the Western one in which most studies on the effects of pay for performance plans have been conducted. Hence, our study intends to contribute to the empirical tests of these plans in a new cultural area; as mentioned above, the highly variable nature of the results that have been documented in different countries emphasize the need for studies further investigating the effects of these plans in various cultural spaces.

## **Method**

### *Participants and procedure*

Since our focus was companies that were implementing short-term pay for performance programs (which deliver financial rewards according to work performances with a frequency of at least once a year), we first identified 25 companies in the Iasi County, Romania that were currently implementing such programs over a time period of more than a year. Then, we approached the management of these companies, explaining the purpose of our research and its methodology, requesting access to their employees and to salary data. We were granted access to sixteen of these companies. The sample of respondents included 315 employees of these organizations. The items of the research instruments were embedded in a survey that was distributed to the employees who participated in the study by a human resource representative in their company. The survey also required respondents to insert their names, in order to allow the matching of each participant's

responses to the objective data concerning their company and themselves. Although this approach imposes participants to divulge their identity, it is frequently used in similar studies that aim to correlate employees' perceptions and attitudes to objective organizational – level information (e.g. Tekleab et al., 2005). Participants were assured that their responses to our survey will remain confidential and that they would have no negative effect on their job status or conditions.

There were 30 participants who refused to divulge their identity. The final sample, including 285 employees (90% of the initial sample), had the following distribution according to the criterion of the work sector: 70 (24.6%) in the banking sector, 40 (16.1%) in the health sector, 51 (17.9%) in the industrial sector, 26 (9.1%) in the private school sector, 70 (24.6%) in the sales sector, and 22 (7.7%) in private consulting. For each participant in the final sample, we gathered from the records of their company the details concerning their current base salary as well as the pay for performance program in which they were currently included. Specifically, we obtained data on the maximum amount of pay allocated for each of the jobs of the employees in our sample in the respective financial incentive system and on their current base salaries, which allowed us to compute a ratio between the two financial indicators. Thus, we measured individual pay dispersion as the maximum number of monthly salaries that the respective employee would receive over a year as supplementary reward, over his/her base salary, if he/she would perform at the maximum level, as defined in the respective pay for performance program. In our sample, dispersion ranged from 1 base salaries to 3; 159 participants (56 per cent) were allocated less than two monthly salaries a year for the highest possible performance in their jobs, while 126 (44 per cent) could receive, if their performance would have been evaluated as maximal, more than two monthly salaries over the respective year. In what concerns the distribution of base salaries, they ranged from 900 RON to 3100 RON.

### *Instruments*

*Work motivation* was evaluated using the three-item scale developed by Patchen (1970) and used in various studies on the factors and consequences of work motivation, such as those on the differences between the employees in the private and those in the public sector on this dimension (Baldwin, 1991; Khojasteh, 1993) or on the links between professional roles and motivation (Crewson, 1997). The three items require participants to assess their agreement with assertions concerning the level of effort that they invest on a daily basis in their work. Higher overall scores indicate higher levels of work motivation.

*Distributive justice* was measured with the scale developed by Brashear, Brooks, and Boles (2004). This 7-item instrument addresses employee perceptions of the distribution of the financial rewards in their company, with respect to their various work inputs (effort, responsibilities, quality of work output, etc.). The instrument has been used in other research on the relationships between distributive justice and various dimensions, such as interpersonal relationships in the workplace (Chan and Jepsen, 2011) or job satisfaction (Ladebo et. al, 2005). Higher overall scores indicate perceptions of adequate distributive justice.

*Procedural justice* was measured with the scale developed by Tekleab, Bartol and Liu (2005). The 2-item scale requires respondents to evaluate the correctness of the procedures through which their financial rewards are determined, on a response scale

ranging from 1 – “not at all correct” to 6 = “absolutely correct”. Higher overall scores indicate high perceived procedural justice.

*Data analysis*

First, we evaluated the internal consistency of our research instruments through their mean inter-item correlations, computed in SPSS 15.0. Second, we computed the Pearson product moment correlations between variables. Both type of information is presented in Table 1, together with the means and standard deviations of all variables. Third, we assessed the adequacy of the proposed causal model, depicted in Figure 1, through structural equation modeling in AMOS 18.0. This method allows the estimation of the statistical adequacy of a complex model, including multiple simultaneous relationships. Its output includes a set of indexes that contribute in the evaluation of the goodness-of-fit of the model to the empirical data (Byrne, 2001); moreover, it offers information concerning the manners in which the model could be improved in what regards its statistical adequacy, through the Modification Indexes in the AMOS 18.0 output. In order to evaluate the goodness-of-fit of the model, we used the following indexes: the chi-square statistic, the Goodness of Fit Index (GFI), the Comparative Fit Index (CFI), the adjusted goodness-of-fit statistic (AGFI) and the Root Mean Square Error of Approximation (RMSEA).

**Results**

The inter-item correlations, presented in Table 1, indicate that all instruments have satisfactory internal consistency. Moreover, the pattern of correlations between variables is in line with our assumptions, as all relationships are significant and positive. In particular, pay dispersion emerged as significantly and positively related to distributive justice, procedural justice and work motivation; base salary was related to distributive justice, while the latter and procedural justice appear as significantly associated to motivation.

**Table 1.** Means, standard deviations, internal consistency and Pearson correlations between variables

	Mean	SD	Mean inter-item correlation	1	2	3	4	5
1. Base salary	1620	230	-	1.0	.23	.37	.22	.17
2. Pay dispersion	1.92	.60	-		1.0	.57	.89	.53
3. Distributive justice	32.4	4.23	.40			1.0	.47	.38
4. Procedural justice	6.8	2.24	.36				1.0	.52
5. Motivation	14.41	1.91	.38					1.0

Source: Authors’ own research.

All correlations are significant at the .01 level. The goal of the next analysis was to assess whether the model of relationships that we hypothesized, which does not include all the possible relationships between these variables, has an adequate fit to the data. Moreover, the structural equation approach allows for the testing of the directional influence between variables, which is necessary in order to gain support for our hypothesis that state causal effects between pay distribution, base salary, organizational justice and work motivation.

The indexes of model fit resulted from this analysis were:  $\chi^2_4 = 20.65$ ,  $p < .01$ ; CFI = .97, AGFI = .90, GFI = .97; RMSEA = .12. Taking into account to the guidelines concerning the

accepted values and intervals of these fit indexes (Bagozzi and Yi, 1988; Byrne, 2001), they suggest an acceptable level of model fit. In order to identify the changes in the hypothesized model that could increase its adequacy to the empirical data, we analyzed the modification indexes. They indicated that the model fit could be significantly increased by adding a causal relationship from base salary to pay dispersion. We re-specified the model by adding this relationship and re-analyzed its model fit. The indexes resulted in this second stage were:  $\chi^2_3 = 6.0$ ,  $p = .11 > .05$ ; CFI = .99, AGFI = .96, GFI = .99; RMSEA = .059 (with a 90% confidence interval .00 – .129). They indicate a much better fit of this model, all indexes corresponding to an adequate fit to the data. There were no additional modifications that would increase its fit, and all estimated parameters (regression weights between variables) were significant at the .05 level. The final model with the standardized regression weights that describe the strength of the influences between variables is presented in Figure 2.

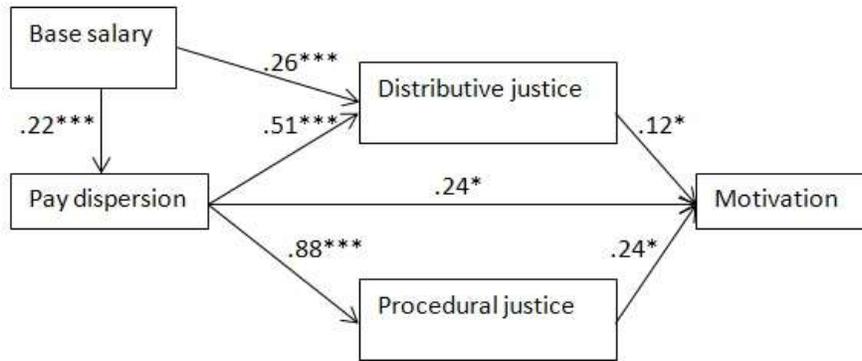


Figure 2. The standardized regression weights of the effects in the final model

\*\*\*  $p < 0.001$ ; \*  $p < 0.05$

Source: Author’s own design.

As it can be noticed in Figure 1, all the relationships in the model are positive. The model does not include all possible relationships between variables, although the previous stage of analysis showed that there are significant correlations between other variables, such as between base salary and procedural justice, or between the latter and distributive justice. Nevertheless, the fact that there are no further modifications that would increase the statistical fit of the final model indicates these relationships do not reach significance when taking into account the whole set of variables.

The results indicate that pay dispersion has two types of effects on work motivation: a direct effect (with a standardized regression weight of .24) and two indirect effects through both distributive justice and procedural justice. The total size of the standardized indirect effect of pay dispersion on motivation, as computed by multiplying the two direct effects that compose each of these mediated influences (e.g. from dispersion to distributive justice, respectively from the latter to motivation) and adding the resulting values (Kline, 1998), is comparable to its direct effect, namely .28. Base salary has a significant direct positive influence on distributive justice (with a standardized regression weight of .24) and one mediated by pay dispersion (with a standardized regression weight of .12) and,

consequently, an indirect effect on motivation (sized .15). In what regards the relationship between base salary and paydispersion, although the effect of the former is significant, it explains only 5% of the variance in pay dispersion. The percentage of variance of the other variables in the model that is explained by their predictors is much higher: .39 for distributive justice, .59 for procedural justice, and .30 for motivation.

## Discussion

While the frequency of pay for performance programs is continuously increasing among the managerial practices that companies use in order to foster the productivity of their employees, the conditions under which such programs deliver the best results are yet to be determined. Our study focused on a specific characteristic of all pay for performance program, namely the maximum amount of supplementary pay that each employee is entitled to receive as reward for one's highest level of performance. This individual pay dispersion, stated in each such program, also leads to variations in pay among employees, as a result of the differences among them in work performance during the implementation of the program. Our results show that this pay dispersion positively influences employees' work motivation, in line with previous studies on the differential effects of dispersion in companies that use pay for performance programs and in those in which financial rewards depend on other criteria than employees' performance (Shaw et al., 2002). Thus, our results provide further support to the notion that employees perceive work performance as a legitimate criterion of differentiation between the financial rewards distributed among them. Consequently, large pay variations in companies implementing pay for performance programs increase employees' motivation. Our results are also in line with previous studies documenting the beneficial effects of such programs on employee motivation and performance in various areas of the world, including Eastern Europe (e.g. Woessmann, 2011).

The main findings of our study concern the mechanisms of this effect, and they reveal that under these programs, pay dispersion has both a direct effect on motivation as well as two indirect effects, mediated by each of the two dimensions of organizational justice. In what regards the direct effect, the most relevant theoretical framework in which it can be explained is expectancy theory (Vroom, 1964), which emphasizes that the size of the rewards is an important determinant of the degree of effort that employees are willing to invest in order to receive them. In this perspective, workplaces in which the pay for performance program allows for a greater amount of pay as reward for high performers have more motivated employees. This result of our investigation can also be seen as indicative of the opposite phenomenon, namely the lack of motivational impact of the pay for performance programs that allocate low financial incentives. In other words, strong motivational effects require reasonable financial investments from the respective company, in order to provide rewards large enough in order to be perceived by the employees as worthy of their high effort investments. The detrimental effect of the low budgets that companies are willing to allocate to their financial incentive programs on their efficiency has been already highlighted elsewhere (Beer and Cannon, 2004), while some investigations even showed that the allocation of low rewards for certain tasks can even dampen employees' motivation to perform them below its previous level, before these financial incentives had been introduced (Gneezy and Rustichini, 2000). Our results also highlight the need for a fine-grained analysis in what regards the components of employee

retribution, that would move beyond the individual amount of pay and that also takes into account other elements with potential motivational effects, such as pay dispersion. For instance, a recent study (Ciobanu and Androniceanu, 2015) on a sample of employees in Romanian public institutions concluded that salary level is not among the most important motivational factors that influence work performance in this work sector. Yet, pay dispersion or the characteristics of the pay system implemented in these institutions were not included in the analysis; future studies should also focus on these potentially important factors of work motivation.

Pay dispersion was also found to influence work motivation through its effect on organizational justice among employees in companies currently implementing pay for performance programs. Our results show that dispersion positively affects distributive, respectively procedural justice; furthermore, each of these two dimensions of organizational justice was found to stimulate employees' motivation, in line with previous studies (Cropanzano and Rupp, 2003). Thus, they lend support to the idea that larger differences in pay are perceived as more equitable than small ones when the main source of this variation is work performance. On the other hand, pay compression, which characterizes the low-budget pay for performance plans that do not allocate large financial rewards for high performers, is associated to lower levels of distributive and procedural justice. Thus, while in the companies that do not use financial incentives pay compression has a protective effect against accusations of inequity (Downes and Choi, 2014), the low dispersion of these incentives has the opposite effect in the companies that implement pay for performance plans.

The effect of pay dispersion on organizational justice is important not only from the standpoint of the subsequent motivational influences of the latter, but also due to the various influences of justice on other employee perceptions, attitudes and behaviors. Taking into account the effects of organizational justice documented in previous research, since large pay dispersions in pay for performance programs lead to higher perceptions of justice we can expect that they would be also associated to lower turnover intentions (Lum et al., 2008), higher pay satisfaction (DeConick and Stilwell, 2004), stronger organizational identification (Kwon et al., 2008) and less counterproductive behaviors (Cohen-Charash and Spector, 2001). Although such effects need to be tested in future studies, our results suggest that higher financial investments in the pay for performance program that a company implements bring not only motivational and productivity gains, but also benefits on other organizational dimensions that are essential for its success.

Comparing the standardized regression weights that quantify the strength of the relationships between the sizes of the pay dispersion allowed by the pay for performance programs implemented by the companies in our sample and the two dimensions of organizational justice, it is noticeable that the effect of dispersion on procedural justice emerged as larger than that on distributive justice. Hence, due to the strict associations between financial rewards and performance in these programs, larger potential ranges of these rewards bring more positive employee perceptions of the fairness of the methods and criteria that the company uses in the decisions regarding financial compensation. The effect on distributive justice is also significant, indicating that employees in companies implementing financial incentive systems with high pay dispersion perceive this variation as more equitable, since has a closer correspondence with the differences in work performance. Yet, the difference between the two effects suggest that the advantages of

large pay dispersions are not at all limited to creating employee positive perceptions of the financial outputs of the pay for performance program, in terms of actual rewards, but they greatly extend to a more general level, that of the perceived fairness of the procedures used by the organization in rewarding its employees, which has substantive motivational effects (Cropanzano and Rupp, 2003).

Our results also indicate that pay dispersion in the pay for performance plans is, on the other hand, dependent upon employees' size of base salary: large pay dispersions tend to be allocated especially to employees with higher base salaries. Although this association appeared as small in our study, it is nevertheless significant, and further studies should explore its source; for instance, the reason of this relationship might be the fact that higher paid jobs are those which involve more responsibilities for the respective employee. As such, companies might be more interested in motivating these employees through financial incentive systems, consequently allocating larger potential rewards for high performances in these jobs, thus creating larger individual pay dispersions. Due to our sample size limitations, our analysis could not address this possibility, which is, therefore, reserved for future research that could analyze the differences among the sizes of pay dispersions allocated for various jobs in the same company as a function of the responsibilities and/or hierarchical status of these organizational positions.

In line with previous research (Tekleab, 2005), our results show that base salary also directly affects distributive justice, in that the lower the employees' base pay, the less equitable they perceive the distribution of financial rewards in their company. Several solutions have been proposed in order to deal with the inequity perceptions induced by the differences in pay among employees, such as clear and open communication between management and employees concerning the factors that create these variations (Shaw and Gupta, 2007) or thoroughly explaining the criteria used in order to evaluate performance in the financial incentive systems (Werner and Ones, 2000). Our study highlights another relevant factor in this respect, namely the positive role of the pay dispersion characterizing the pay for performance program implemented by the respective company, which, as noted above, can increase the level of distributive justice, as perceived by the employees. In other words, employee perceptions of inequity that stem from their evaluation of the distribution of base salaries in their organization can be redressed, at least to a certain degree, by the large financial rewards that they could receive for high levels of performance in their work.

The present study has several limitations that should be noted. First, there was a certain percentage of participants who refused to divulge their identity and were consequently eliminated from our analysis; it is possible that in their case, the relationships that we investigated, between pay dispersion, organizational justice and work motivation, to be different than in the case of the participants included in the final sample. Second, all the data was collected at a single point in time, an approach that does not allow for the investigations of the variations in motivation in time, as a function of the pay for performance system. Thirdly, there were sample size limitations that did not allow us to perform in-depth analysis concerning the role of potentially important variables, such as the amount of job responsibilities (noted above) or the work sector of the respective company, that need to be addressed by future studies.

## MMCKS Conclusion

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The amount of pay dispersion introduced by the pay for performance programs implemented by the Romanian companies in our sample has a significant positive impact on employees' work motivation. Thus, the size of the financial rewards in these programs appears to be a potent motivational force, alongside the other characteristics of the financial incentive systems. In part, this impact is mediated by the increases in the distributive and procedural justice perceived by the employees when their company uses a pay for performance program that allows them to receive large financial rewards besides their base pay. Furthermore, the effects of pay dispersion in these programs on organizational justice could extend to positive influences on other dimensions, which could be tested by further research.

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